

## Remarks

### 1. Summary of the office action

In the office action mailed June 18, 2009, (i) the Examiner rejected claims 1-10, 15-18, 21, 25-32, 34-47, and 52-66 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,175,868 (Lavian), (ii) the Examiner rejected claims 11-14 and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and U.S. Patent No. 5,535,380 (Bergkvist), (iii) the Examiner rejected claims 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and U.S. Patent No. 6,829,437 (Kirby), (iv) the Examiner rejected claim 33 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and U.S. Patent No. 6,738,814 (Cox), (v) the Examiner rejected claims 48-50 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and U.S. Patent No. 6,715,077 (Vasudevan), (vi) the Examiner rejected claim 51 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and U.S. Patent No. 5,987,552 (Chittor), (vii) the Examiner rejected claim 69 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and Chittor, (viii) the Examiner the Examiner rejected claims 70-74 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and Bergkvist, (ix) the Examiner rejected claim 76 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and U.S. Patent No. 6,507,810 (Razavi), (x) the Examiner rejected claims 77 and 82 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,383,341 (Saito) in view of Razavi, (xi) the Examiner rejected claim 78 under 35 U.S.C. § 103(a) as being unpatentable over Lavian, Razavi, and U.S. Patent No. 6,425, 004 (Hardjono), (xii) the Examiner rejected claim 79 under 35 U.S.C. § 103(a) as being unpatentable over Lavian, Razavi, and U.S. Patent Application Publication No. 2001/0056540 (Ober), and (xiii) the Examiner rejected claims 80 and 81 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and Kirby. Applicant respectfully traverses the rejection of these claims.

## 2. Status of the claims

Claims 1-66 and 76-82 are currently pending. Of the pending claims, claims 1, 66, and 77 are independent.

## 3. Response to claim rejections under 35 U.S.C. § 102

The Examiner rejected claims 1-10, 15-18, 21, 25-32, 34-47, and 52-66 under 35 U.S.C. § 102(e) as being anticipated by Lavian. Under M.P.E.P. § 2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Moreover, “[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.” *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983), 1548 (citing to *Soundsciber Corp. v. U.S.*, 360 F.2d 954, 960 (Ct. Cl. 1966) (emphasis added)). Applicant submits that Lavian does not teach or suggest each and every element as arranged in claims 1-10, 15-18, 21, 25-32, 34-47, and 52-66.

### a. Claims 1-10, 15-18, 21, 25-32, 34-47, and 52-65

**Lavian does not disclose or suggest coupling a plurality of network elements in a vehicle, the vehicle including at least one vehicle bus that is connected to at least one peripheral electronic device, as arranged in claim 1**

Independent claim 1 recites, *inter alia*, “coupling a plurality of network elements in a vehicle, the vehicle including at least one vehicle bus that is connected to at least one peripheral electronic device.” In rejecting claim 1, the Examiner cited to Lavian, column 6, lines 11-30, for disclosing this element. Applicant submits that this portion of Lavian, alone or in combination with the other portions of Lavian, does not disclose or suggest this element of claim 1.

Lavian, column 6, lines 11-30, at best, discloses a data bus 911, preferably a PCI data bus, is used to transfer information between the processor 905, memory 907, coprocessor 909, and the maintenance data port 913. Even if it is assumed, for the sake of argument, that processor 905,

memory 907, coprocessor 909, and maintenance data port 913 amount to a plurality of network elements, Applicant submits that Lavian does not disclose or suggest a vehicle such that Lavian's processor 905, memory 907, coprocessor 909, and maintenance data port 913 amount to a plurality of network elements *in a vehicle* or that Lavian's data bus 911 amounts to at least one *vehicle* bus that is connected to at least one peripheral electronic device. For at least these reasons, Lavian does not disclose or suggest each and every element as arranged in claim 1.

**Lavian does not disclose or suggest the plurality of network elements automatically assembling and configuring in response to node information, as arranged in claim 1**

Independent claim 1 also recites "the plurality of network elements automatically assembling and configuring in response to the node information." In rejecting claim 1, the Examiner cited to Lavian, column 4, line 62, to column 5, line 22, for disclosing this element. Applicant submits that this portion of Lavian, alone or in combination with the other portions of Lavian, does not disclose or suggest this element of claim 1.

Lavian, column 4, line 62, to column 5, line 22, at best, discloses that network configuration software 313 can be downloaded either from the NMS 301 or applications server 307 to reconfigure the network switch 305. Even if it is assumed, for the sake of argument, that Lavian's network configuration software 313 amounts to the node information recited in claim 1, Applicant submits that reconfiguring a single element (i.e., network switch 305) does not amount to *a plurality of network elements* automatically assembling and configuring in response to Lavian's network configuration software (i.e., the node information, according to the assumption). For this additional reason, Lavian does not disclose or suggest each and every element as arranged in claim 1.

Since Lavian does not disclose each and every element of claim 1, as arranged in claim 1, Lavian does not anticipate claim 1. Applicant submits that claim 1 is therefore in condition for

allowance. Further, without conceding the assertions made by the Examiner with respect to dependent claims 2-9, 15-18, 21, 25-32, 34-47, and 52-65, Applicant submits that claims 2-9, 15-18, 21, 25-32, 34-47, and 52-65 are allowable for at least the reason that each of these claims depends from allowable claim 1.

**b. Claim 66**

**Lavian does not disclose or suggest coupling a plurality of network elements in a vehicle, the vehicle including at least one electronic device, at least one node and at least one vehicle bus, wherein the at least one node includes at least one gateway node in the vehicle, as arranged in claim 66**

In response to Applicant's remarks filed on April 7, 2009, the Examiner disagreed that Lavian does not teach or suggest coupling a plurality of network elements in a vehicle, the vehicle including at least one electronic device, at least one node and at least one vehicle bus, wherein the at least one node includes at least one gateway node in the vehicle, as recited in claim 66. Then, the Examiner stated, "[a]s shown in figure 4, there are a plurality of network elements connected through the routing switch (i.e., optivity, app server, authentication server, and a web server). It is well known in the art that peripheral devices can include devices connected to each other in a network. So as discussed, Lavian discloses multiple network devices connected together [column 4, lines 37-61]. Lavian discloses the gateway node in figure 10 (i.e., gateway 1011)." See, office action, pages 2-3.

As stated above in the remarks regarding the rejection of claim 1, Lavian does not disclose or suggest *a vehicle*. Therefore, even if it is assumed, for the sake of argument, that Lavian discloses a plurality of network elements and at least one gateway node, Applicant submits that Lavian does not disclose or suggest coupling a plurality of network elements *in a vehicle, the vehicle including* at least one electronic device, at least one node and at least one *vehicle bus*,

wherein the at least one node includes at least one gateway node *in the vehicle*, as arranged in claim 66.

**Lavian does not disclose or suggest at least one remote computer remotely accessing the plurality of network elements via at least one wireless Internet coupling, as arranged in claim 66**

Applicant submits that Lavian does not disclose or suggest at least one wireless Internet coupling and Lavian therefore does not disclose or suggest at least one remote computer remotely accessing the plurality of network elements via at least one wireless Internet coupling, as arranged in claim 66.

In rejecting claim 66, the Examiner cited to Lavian, column 4, line 62, to column 5, line 22, for disclosing at least one remote computer remotely accessing the plurality of network elements via at least one wireless Internet coupling. This portion of Lavian describes figure 3 which shows a high level system architecture.

As shown in figure 3 and described by Lavian at column 4, line 63, to column 5, line 6, (i) a network maintenance station (NMS) 301 may be coupled to a network routing switch 305 via a maintenance data port on the network switch 305, (ii) personal computer 303 running browser software may optionally communicate with both the NMS 301 and network switch 305, (iii) network monitor software 311 may preferably be downloaded from the NMS 301 to a processor in the network switch 305 for monitoring network data traffic, and (iv) the monitor software 311 is downloaded through a control data channel, preferably through the maintenance data port on the network switch 305. These portions of Lavian, as well as the rest of Lavian, do not disclose or suggest at least one wireless Internet coupling. Applicant submits that Lavian therefore does not disclose or suggest at least one remote computer remotely accessing the plurality of network elements via at least one wireless Internet coupling, as arranged in claim 66.

Since Lavian does not disclose each and every element of claim 66, as arranged in claim 66, Lavian does not anticipate claim 66. Applicant submits that claim 66 is therefore in condition for allowance.

**4. Response to claim rejections under 35 U.S.C. § 103**

**a. Claims 69-74**

The Examiner rejected claim 69 under 35 U.S.C. § 103(a) as being obvious over Lavian and Chittor, and the Examiner the Examiner rejected claims 70-74 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and Bergkvist. Applicant cancelled claims 69-74 in Applicant's response filed on April 7, 2009. Applicant submits that the rejections of claims 69-74 are therefore moot. Applicant respectfully requests that the Examiner withdraw the rejections of claims 69-74.

**b. Claim 77**

The Examiner rejected claim 77 under 35 U.S.C. § 103(a) as being obvious over Saito and Razavi. Under M.P.E.P. § 2142, the key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR*, 550 U.S. at \_\_\_, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Applicant submits that the Examiner has not

articulated reasons with some rational underpinning to support the legal conclusion of obviousness of claim 77.

Saito is directed to a data transfer control device and a relay device which are suitable for use in a *home network environment*. See, Saito, abstract. *Saito does not disclose or suggest a vehicle*. In rejecting claim 77, the Examiner stated Razavi teaches a sub-network in a vehicle, and that it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Saito so that the network would have been in a vehicle that comprised a motor vehicle. The Examiner also stated that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Saito by the teaching of Razavi because the network provides for easy reconfiguration and upgrading of the vehicle, as well as improved communication of information between the vehicle's systems and integration of the vehicle network into external networks. Applicant respectfully disagrees.

Applicant submits that a person having ordinary skill in the art at the time the invention was made would not have modified Saito by the teaching of Razavi so as to provide for easy reconfiguration and upgrading of the vehicle, as stated by the Examiner, because Saito pertains to devices suitable for a home network environment and does not disclose or suggest a vehicle or vehicle systems that require reconfiguration or upgrading. Additionally, Applicant submits that a person having ordinary skill in the art at the time the invention was made would not have modified Saito by the teaching of Razavi so as to provide improved communication of information between the vehicle's systems and integration of the vehicle network into external networks, as stated by the Examiner, because Saito does not disclose or suggest a vehicle system or a vehicle network.

Since the Examiner has not articulated rational reasons for why a person having ordinary skill in the art would have modified Saito with Razavi at the time the invention was made, Applicant submits that the Examiner has not articulated reasons with some rational underpinning to support the legal conclusion of obviousness of claim 77. Applicant further submits that claim 77 is therefore in condition for allowance.

**c. Claim 82**

The Examiner rejected dependent claim 82 under 35 U.S.C. § 103(a) as being obvious over Saito and Razavi. Applicant submits that the Examiner has not established *prima facie* obviousness of claim 82 for at least the reason that Saito and Razavi do not reasonably lead to each and every element recited in claim 82.

In particular, Saito and Razavi do not reasonably lead to wherein the first vehicle bus is an original equipment manufacturer (OEM) bus that carries out communications using a controller area network (CAN) protocol. In rejecting claim 82, the Examiner cited to Saito, column 19, lines 34-40, for teaching this element of claim 82. This portion of Saito states the transmitting terminal 1 and the receiving terminal 6 are non-IP terminals (also referred to as 1394 terminals hereafter), that is, terminals which can only understand the 1394 protocol (a protocol dedicated to 1394 such as AV/C protocol and IEC 61883, for example, and which cannot understand the Internet Protocol (IP)). They may be the dedicated 1394 terminals. Applicant submits that this portion of Saito does not disclose or suggest a vehicle bus that is an OEM bus or that the vehicle bus carries communications using a CAN protocol, and the IEEE 1394 protocol, the AV/C protocol, and IEC 61833 do not amount to a CAN protocol.

Applicant further submits that Razavi and the other portions of Saito do not make up for the deficiency of Saito column 19, lines 34-40. In other words, Razavi and the other portions of



Saito do not disclose or suggest wherein the first vehicle bus is an original equipment manufacturer (OEM) bus that carries out communications using a controller area network (CAN) protocol, as recited in claim 82. Since Saito and Razavi do not lead to each and every element recited in claim 82, Applicant submits that the Examiner has failed to establish *prima facie* obviousness of claim 82. Applicant submits that claim 82 is therefore in condition for allowance.

Additionally or alternatively, Applicant submits that claim 82 is in condition for allowance for at least the reason that claim 82 depends from allowable claim 77.

**d. Claims 11-14 and 19-20**

The Examiner rejected dependent claims 11-14 and 19-20 under 35 U.S.C. § 103(a) as being obvious over Lavian and Bergkvist. Claims 11-14 and 19-20 depend from independent claim 1, and necessarily include all of the elements of claim 1. As stated above, Lavian does not disclose or suggest coupling a plurality of network elements in a *vehicle*, the *vehicle* including at least one node and at least one *vehicle* bus that is connected to at least one peripheral electronic device, and the plurality of network elements automatically assembling and configuring in response to the node information, as recited in claim 1. Applicant submits that Bergkvist does not make up for this deficiency of Lavian, and therefore, Applicant submits that claims 11-14 and 19-20 are in condition for allowance.

**e. Claims 22-24**

The Examiner rejected dependent claims 22-24 under 35 U.S.C. § 103(a) as being obvious over Lavian and Kirby. Claims 22-24 depend from independent claim 1, and necessarily include all of the elements of claim 1. As stated above, Lavian does not disclose or suggest coupling a plurality of network elements in a *vehicle*, the *vehicle* including at least one node and at least one *vehicle* bus that is connected to at least one peripheral electronic device, and the plurality of

network elements automatically assembling and configuring in response to the node information, as recited in claim 1. Applicant submits that Kirby does not make up for this deficiency of Lavian, and that claims 22-24 are therefore in condition for allowance.

**f. Claim 33**

The Examiner rejected dependent claim 33 under 35 U.S.C. § 103(a) as being obvious over Lavian and Cox. Claim 33 depends from independent claim 1, and necessarily includes all of the elements of claim 1. As stated above, Lavian does not disclose or suggest coupling a plurality of network elements in a *vehicle*, the *vehicle* including at least one node and at least one *vehicle* bus that is connected to at least one peripheral electronic device, and the plurality of network elements automatically assembling and configuring in response to the node information, as recited in claim 1. Applicant submits that Cox does not make up for this deficiency of Lavian, and that claim 33 is therefore in condition for allowance.

**g. Claims 48-50**

The Examiner rejected dependent claims 48-50 under 35 U.S.C. § 103(a) as being obvious over Lavian and Vasudevan. Claims 48-50 depend from independent claim 1, and necessarily include all of the elements of claim 1. As stated above, Lavian does not disclose or suggest coupling a plurality of network elements in a *vehicle*, the *vehicle* including at least one node and at least one *vehicle* bus that is connected to at least one peripheral electronic device, and the plurality of network elements automatically assembling and configuring in response to the node information, as recited in claim 1. Applicant submits that Vasudevan does not make up for this deficiency of Lavian, and that claims 48-50 are therefore in condition for allowance.

**h. Claim 51**

The Examiner rejected dependent claim 51 under 35 U.S.C. § 103(a) as being obvious over Lavian and Chittor. Claim 51 depends from independent claim 1, and necessarily includes all of the elements of claim 1. As stated above, Lavian does not disclose or suggest coupling a plurality of network elements in a *vehicle*, the *vehicle* including at least one node and at least one *vehicle* bus that is connected to at least one peripheral electronic device, and the plurality of network elements automatically assembling and configuring in response to the node information, as recited in claim 1. Applicant submits that Chittor does not make up for this deficiency of Lavian, and that claim 51 is therefore in condition for allowance.

**i. Claim 76**

The Examiner rejected dependent claim 76 under 35 U.S.C. § 103(a) as being obvious over Lavian and Razavi. Claim 76 depends from independent claim 1, and necessarily includes all of the elements of claim 1.

Lavian is directed to a method and apparatus for automatically configuring a network switch having external network data ports, a processor, and memory. *See*, Lavian, abstract. Lavian *does not disclose or suggest a vehicle* or a *vehicle bus*. In rejecting claim 76, the Examiner stated Razavi teaches a sub-network in a vehicle, and that it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified Lavian so that the network would have been in a vehicle that comprised a motor vehicle. The Examiner also stated that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lavian by the teaching of Razavi because the network provides for easy reconfiguration and upgrading of the vehicle, as well as improved

communication of information between the vehicle's systems and integration of the vehicle network into external networks. Applicant respectfully disagrees.

Applicant submits that a person having ordinary skill in the art at the time the invention was made would not have modified Lavian by the teaching of Razavi so as to provide for easy reconfiguration and upgrading of the vehicle, as stated by the Examiner, because Lavian pertains to a method and apparatus for automatically configuring a network switch having external network data ports, a processor, and memory, and does not disclose or suggest a vehicle or vehicle systems that require reconfiguration or upgrading. Additionally, Applicant submits that a person having ordinary skill in the art at the time the invention was made would not have modified Lavian by the teaching of Razavi so as to provide improved communication of information between the vehicle's systems and integration of the vehicle network into external networks, as stated by the Examiner, because Lavian does not disclose or suggest a vehicle system or a vehicle network.

Since the Examiner has not articulated rational reasons for why a person having ordinary skill in the art would have modified Lavian with Razavi at the time the invention was made, Applicant submits that the Examiner has not articulated reasons with some rational underpinning to support the legal conclusion of obviousness of claim 76. Applicant further submits that claim 76 is therefore in condition for allowance.

**j. Claim 78**

The Examiner rejected claim 78 under 35 U.S.C. § 103(a) as being obvious over Lavian, Razavi, and Hardjono. Claim 78 recites the gateway node instructing a misbehaving network element of the plurality of network elements to shut down. In rejecting claim 78, the Examiner stated that the Lavian-Razavi combination does not teach that the gateway node instructs a

misbehaving network element of the plurality of network elements to shut down. The Examiner then cited to Hardjono, column 3, lines 52-60, for teaching this element of claim 78.

The portion of Hardjono cited by the Examiner states “when the router network includes a misbehaving device that generates invalid routing information, the misbehaving device can cause performance degradation, data loss, or even total failure within the router network. In order to prevent such consequences, each router in the router network should verify and authenticate the routing information it receives. Furthermore, the misbehaving device must be located so that the misbehaving device can be *isolated or fixed*.” (Emphasis added).

Applicant submits that isolating or fixing a misbehaving device does not amount to instructing a misbehaving network element to shut down. Therefore, even if it is assumed, for the sake of argument, that Lavian, Razavi, and Hardjono disclose a gateway node that isolates or fixes a misbehaving device, Applicant submits that Lavian, Razavi, and Hardjono do not reasonably lead to the gateway node instructing a misbehaving network element of the plurality of network elements to shut down, as recited in claim 78. Applicant further submits that since Lavian, Razavi, and Hardjono do not reasonably lead to each and every element of claim 78, the Examiner has failed to establish *prima facie* obviousness of claim 78, and claim 78 is therefore in condition for allowance.

**k. Claim 79**

The Examiner rejected dependent claim 79 under 35 U.S.C. § 103(a) as being unpatentable over Lavian and Razavi as applied to claim 77, and further in view of Ober. This appears to be an error since the Examiner rejected claim 77 as being unpatentable over Saito and Razavi.

Applicant assumes that the Examiner meant to reject claim 79 under 35 U.S.C. § 103(a) as being obvious over Saito and Razavi as applied to claim 77 and further in view of Ober. As stated above in discussing claim 77, the Examiner has not articulated rational reasons for why a person having ordinary skill in the art, at the time the invention was made, would have modified Saito with Razavi. In rejecting claim 79, the Examiner still has not articulated rational reasons for why a person having ordinary skill in the art, at the time the invention was made, would have modified Saito with Razavi.

Since the Examiner has not articulated rational reasons for why a person having ordinary skill in the art, at the time the invention was made, would have modified Saito with Razavi, Applicant submits that the Examiner has not articulated reasons why a person having ordinary skill in the art, at the time the invention was made, would have modified Saito and Razavi with Ober. Applicant submits that the Examiner has not articulated reasons with some rational underpinning to support the legal conclusion of obviousness of claim 79, and that claim 79 is therefore in condition for allowance.

#### **I. Claims 80 and 81**

The Examiner rejected dependent claims 80 and 81 under 35 U.S.C. § 103(a) as being obvious over Lavian and Kirby. Applicant submits that the Examiner has not established *prima facie* obviousness of claim 80 for at least the reason that Lavian and Kirby do not reasonably lead to each and every element recited in claim 80.

In rejecting claim 80, it appears that the Examiner may have copied comments used to reject claims 22-24 based on Lavian and Kirby. Additionally, the Examiner did not explain how the combination of Lavian and Kirby disclose or suggest wherein the switch of the first speed is coupled to the first vehicle bus, and the switch of the second speed is coupled to the second vehicle bus.

The Examiner cited to Kirby, column 6, lines 52-63, for disclosing at least one hybrid switch including at least one interface port coupled among at least one switch of a first speed and at least one switch of a second speed. This portion of Kirby discloses an optical switch 205 in a hybrid electro-optic switch (HEOS), and each wavelength is de-multiplexed 225, switched and multiplexed 260 such that a given wavelength or optical channel is routed to an output fiber 265 based on control signals 255. Even if it is assumed, for the sake of argument, that Kirby's optical switch 205 amounts to the at least one hybrid switch of claim 80, and Kirby's de-multiplexers and/or multiplexers amounts to the switch of the first speed and the switch of the second speed of claim 80, Applicant submits that Kirby, alone or in combination with Lavian, does not disclose or suggest that any of Kirby's de-multiplexers and/or multiplexers are connected to a first vehicle bus and a second vehicle bus.

Since Lavian and Kirby do not lead to each and every element recited in claim 80, Applicant submits that the Examiner has failed to establish *prima facie* obviousness of claim 80, and that claim 80 is therefore in condition for allowance. Further, without conceding the assertions made by the Examiner with respect to dependent claim 81, Applicant submits that claim 81 is allowable for at least the reason that it depends from allowable claim 80.

## **5. Conclusion**

Applicant believes that all of the pending claims have been addressed in this response. However, failure to address a specific rejection or assertion made by the Examiner does not signify that Applicant agrees with or concedes that rejection or assertion.

For the foregoing reasons, Applicant submits that claims 1-66, and 76-82 are in condition for allowance. Therefore, Applicant respectfully requests favorable reconsideration and allowance of all the pending claims.

Respectfully submitted,

Dated: August 5, 2009

/David L. Ciesielski/

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